



SEQUENCE LISTING

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Andersen, Kim Vilbourn
Rasmussen, Poul Baad
Pedersen, Anders Hjelholt

<120> NEW MULTIMERIC INTERFERON BETA
POLYPEPTIDES

<130> 0220us210

<140> US 10/004,201

<141> 2001-11-01

<150> US 60/245,645

<151> 2000-11-02

<160> 39

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 840

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (76)...(636)

<221> sig_peptide

<222> (76)...(138)

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<222> (139)...(636)

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gttcgtgttg tcaac atg acc aac aag tgt ctc ctc caa att gct ctc ctg 111

Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu
-20 -15 -10

ttg tgc ttc tcc act aca gct ctt tcc atg agc tac aac ttg ctt gga 159
Leu Cys Phe Ser Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly

-5 1 5

ttc cta caa aga agc agc aat ttt cag tgt cag aag ctc ctg tgg caa 207
Phe Leu Gln Arg Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln

10 15 20

ttg aat ggg agg ctt gaa tac tgc ctc aag gac agg atg aac ttt gac 255
Leu Asn Gly Arg Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp

25 30 35

atc cct gag gag att aag cag ctg cag cag ttc cag aag gag gac gcc 303
 ile Pro Glu Glu Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala
 40 45 50 55
 gca ttg acc atc tat gag atg ctg cag aac atc ttt gct att ttc aga 351
 Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg
 60 65 70
 caa gat tca tct agc act ggc tgg aat gag act att gtt gag aac ctc 399
 Gln Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu
 75 80 85
 ctg gct aat gtc tat cat cag ata aac cat ctg aag aca gtc ctg gaa 447
 Leu Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu
 90 95 100
 gaa aaa ctg gag aaa gaa gat ttc acc agg gga aaa ctc atg agc agt 495
 Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser
 105 110 115
 ctg cac ctg aaa aga tat tat ggg agg att ctg cat tac ctg aag gcc 543
 Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala
 120 125 130 135
 aag gag tac agt cac tgt gcc tgg acc ata gtc aga gtg gaa atc cta 591
 Lys Glu Tyr Ser His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu
 140 145 150
 agg aac ttt tac ttc att aac aga ctt aca ggt tac ctc cga aac 636
 Arg Asn Phe Tyr Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn
 155 160 165
 tgaagatctc ctagcctgtg cctctgggac tggacaattg cttcaagcat tcttcaacca 696
 gcagatgctg tttaagtgc tgatggctaa tgtactgcat atgaaaggac actagaagat 756
 tttgaaattt ttattaaatt atgagttatt tttattttatt taaattttat tttggaaaat 816
 aaattatttt tgggtgcaaaa gtca 840

<210> 2
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 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIGNAL
 <222> (1)...(21)
 <221> CHAIN
 <222> (22)...(187)

<400> 2
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 -20 -15 -10
 Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
 -5 1 5 10
 Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
 15 20 25
 Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu

gag gac gcc gct ctg acc atc tac gag atg ctg cag aac atc ttc gcc	291
Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala	
55 60 65	
atc ttc cgc cag gac tcc agc tcc acc ggt tgg aac gag acc atc gtg	339
Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val	
70 75 80	
gag aac ctg ctg gcc aac gtg tac cac cag atc aac cac ctg aag acc	387
Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr	
85 90 95 100	
gtg ctg gag gag aag ctg gag aag gag gac ttc acc cgc ggc aag ctg	435
Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu	
105 110 115	
atg agc tcc ctg cac ctg aag cgc tac tat ggc cgc atc ctg cac tac	483
Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile Leu His Tyr	
120 125 130	
ctg aag gcc aag gag tac agc cac tgc gcc tgg acc atc gta cgc gtg	531
Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr Ile Val Arg Val	
135 140 145	
gag atc ctg cgc aac ttc tac ttc atc aac cgc ctg acc ggc tac ctg	579
Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu Thr Gly Tyr Leu	
150 155 160	
cgc aac tgataaggat ccactagtcc agtgtggtg	614
Arg Asn	
165	

<210> 4
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 <213> Artificial Sequence

<220>
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<221> VARIANT
 <222> 4
 <223> Xaa = Thr or Ser

<400> 4
 Ile Asn Ala Xaa
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<210> 5
 <211> 4
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<220>
 <223> Synthetic construct

<221> VARIANT
<222> 4
<223> Xaa = Thr or Ser

<400> 5
Gly Asn Ile Xaa
1

<210> 6
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<221> VARIANT
<222> 4
<223> Xaa = Thr or Ser

<400> 6
Val Asn Ile Xaa
1

<210> 7
<211> 4
<212> PRT
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<223> Synthetic construct

<221> VARIANT
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<223> Xaa = Thr or Ser

<400> 7
Ser Asn Ile Xaa
1

<210> 8
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<221> VARIANT
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<223> Xaa = Thr or Ser

<400> 8

Ala Ser Asn Ile Xaa
1 5

<210> 9
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<221> VARIANT
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<223> Xaa = Thr or Ser

<400> 9
Ser Pro Ile Asn Ala Xaa
1 5

<210> 10
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<221> VARIANT
<222> 7
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<400> 10
Ala Ser Pro Ile Asn Ala Xaa
1 5

<210> 11
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<221> VARIANT
<222> 4, 8
<223> Xaa = Thr or Ser

<400> 11
Ala Asn Ile Xaa Ala Asn Ile Xaa Ala Asn Ile
1 5 10

<210> 12
<211> 14

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<221> VARIANT
<222> 4, 9, 14
<223> Xaa = Thr or Ser

<400> 12
Ala Asn Ile Xaa Gly Ser Asn Ile Xaa Gly Ser Asn Ile Xaa
1 5 10

<210> 13
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 13
ccgtcagatc ctaggctagc ttattgcggt agtttatcac 40

<210> 14
<211> 32
<212> DNA
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<220>
<223> Synthetic construct

<400> 14
gagctcggta ccaagctttt aagagctgta at 32

<210> 15
<211> 77
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 15
gctgaacggg cgcttgagtg actgcctgaa ggacaggatg aacttcgaca tccccgagga 60
aatccgccag ctgcagc 77

<210> 16
<211> 35
<212> DNA
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<220>
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<400> 16
 tctccacgcg tacgatggtc caggcgcagt ggctg 35

 <210> 17
 <211> 70
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 17
 caccacactg gactagtgga tccttatcag ttgcgcaggt agccggtcag gcggttgatg 60
 aagtagaagt 70

 <210> 18
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 18
 catcagcttg ccggtggtgt tgtctctcctt c 31

 <210> 19
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic construct

 <400> 19
 gaaggaggac aacaccaccg gcaagctgat g 31

 <210> 20
 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic construct

 <400> 20
 cacactggac tagtaagctt ttatcagttg cgcaggtagc 40

 <210> 21
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic construct

 <400> 21

gaggagttcg aacttccagt gccagcgct cctgtggcag ctgaacg 47

<210> 22
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 22
 tttaaactgg atccagccac catgaccaac aag 33

<210> 23
 <211> 63
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic construct

<400> 23
 cggccatagt agcgcttcag gtgcagggag ctcatcagct tgccggtggt gttgtcctcc 60
 ttc 63

<210> 24
 <211> 62
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic construct

<400> 24
 gaaggaggac aacaccaccg gcaagctgat gagctccotg cacctgaagc gctactatgg 60
 cc 62

<210> 25
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic construct

<400> 25
 cgcgatcca tatgaccaac aagtgcctg 29

<210> 26
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic construct

<400> 26

ggcgtcctcc ttggtgaagt tctgcagctg 30

<210> 27
 <211> 39
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic construct

<400> 27
 atatatccca agcttttata agttgcgcag gtagccggt 39

<210> 28
 <211> 30
 <212> DNA
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<220>
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<400> 28
 cagctgcaga acttcaccaa ggaggacgcc 30

<210> 29
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic construct

<400> 29
 cgcgatcca gccaccatga ccaacaagt cctg 34

<210> 30
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 30
 caggttgtag ctcatattcc ggagataccc cgtcaggcgg ttg 43

<210> 31
 <211> 65
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic construct

<400> 31
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 agtgc 65

<210> 32
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic construct

<400> 32
aagaaggcac agtcgagg

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<210> 33
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic linker peptide

<400> 33
Gly Ser Thr Ser Gly Ser Ser Gly Lys Ser Ser Glu Gly Lys Gly
1 5 10 15

<210> 34
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic linker peptide

<400> 34
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 35
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic linker peptide

<400> 35
Gly Gly Gly Gly Ser Gly Gly Gly Asn Ser Thr Gly Gly Gly Ser
1 5 10 15

<210> 36
<211> 20
<212> DNA
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<220>

<223> Synthetic primer

<400> 36

ggcacctatt ggtcttactg

20

<210> 37

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 37

gcgggggagg cagcgggtggc gggaactcca ccggtggcgg gagcatgagc tacaacctgc 60
tcggc 65

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<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 38

gtccccgcca ccggtggagt tcccgccacc gctgcctccc ccgccattcc ggagataccc 60
cgtcag 66

<210> 39

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 39

aagaaggcac agtcgagg

18